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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

FERRIS III, FRED O

ART UNIT PAPER NUMBER

2128

DATE MAILED: 10/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|------------------------------------|--|
| Office Action Summary | Application No. 09/992,624 | Applicant(s) HIEW ET AL. | |
| | Examiner Fred Ferris | Art Unit 2128 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-34 and 36-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-4 and 6-17 is/are allowed.
- 6) ☒ Claim(s) 18-34 and 36-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 November 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. *Claims 1-40 have been presented for examination based on applicant's amendment filed 4 August 2005. Applicants have now cancelled claims 5 and 35. Claims 1-4, and 6-17 have been allowed over the prior art of record. Claims 18-34 and 36-40 remain rejected by the examiner.*

Response to Arguments

2. *Applicant's arguments filed 4 August 2005 have been fully considered.*

Regarding applicant's response to 102(b) rejections: The examiner withdraws the 102(b) rejection in view of applicant's amendment to the claims filed 4 August 2005.

Regarding applicant's response to 103(a) rejection: The examiner withdraws the 103(a) rejection of dependent claim 4 in view of applicant's amendment to dependent claim 1 as noted above. However, the examiner has now applied new 103(a) and 101 rejections to amended method claims 18-34 and 36-40. (Please see new 103(a) and 101 rejections below.

Drawings

3. *Applicant's drawings submitted on 1 November 2002 are informal and acceptable for examination purposes only. New formal drawings will be required when the case is placed in condition for allowance.*

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 18-34 and 36-40 are rejected under 35 U.S.C. 101 because the claimed invention is drawn to non-statutory subject matter.

Claims 18-34 and 36-40 are rejected under 35 U.S.C. 101 because the claimed invention is drawn to non-statutory subject matter. Specifically, independent claim 1 can be interpreted as meaning the method is carried out by a mental process augmented (calculated) using pencil and paper. (i.e. not a machine or computer process) Dependent claims inherit the defect of the claims from which they depend.

MPEP 2111 [R-1] recites the following:

**"2111 [R-1] Claim Interpretation; Broadest Reasonable Interpretation
CLAIMS MUST BE GIVEN THEIR BROADEST REASONABLE
INTERPRETATION**

During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000).< Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969) (Claim 9 was directed to a process of analyzing data generated by mass spectrographic analysis of a gas. The process comprised selecting the data to be analyzed by subjecting the data to a mathematical manipulation. The examiner made rejections under 35 U.S.C. 101 and 102. In the 35 U.S.C. 102 rejection, the examiner explained that the claim was anticipated by a mental process augmented by pencil and paper markings. The court agreed that the claim was not limited to using a machine to carry out the process since the claim did not explicitly set forth the machine. The court explained that "reading a claim in light of the specification, to thereby interpret limitations explicitly recited in the claim, is a quite different thing from reading limitations of the specification into a claim, to thereby narrow the scope of the claim by implicitly adding disclosed limitations which have no express basis in the claim." The court found that applicant was advocating the latter, i.e., the impermissible importation of subject matter from the specification into the claim.). See also In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997) (The court held that the PTO is not required, in the course of prosecution, to interpret claims in applications in the same manner as a court would interpret claims in an infringement suit. Rather, the "PTO applies to verbiage of the proposed claims the broadest reasonable meaning of the words

in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description contained in applicant's specification.")"

The Examiner further submits that, in view of the language of the claims, Applicant's have merely claimed a manipulation of abstract ideas by a mental process and have not specifically set forth a machine or computer process for performing the actual method for examining software. The examiner suggests that the preamble recite "A computer implemented method for examining software.." in order to clarify this issue.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 18-20, 22-34 and 36-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,851,107 issued to Coad et al in view of "An Analysis of Geometric Modeling in Database Systems", Kemper et al, ACM Computing Surveys, Vol. 19, No. 1, March 1987.

Regarding independent claim 18: Coad teaches a software development tool (development environment) where a developer (user) can simultaneously view a graphical representation and a text representation of source code (Abstract, Fig. 2). These graphical and textural views are synchronized (i.e. dynamically linked) such that modifications to one view are automatically reflected in the other view (CL4-L61 to CL-

L3). (i.e. edits to the graphical flow are automatically reflected in the source code (text) view and visa versa) Coad further discloses the ability to detect the particular language of the source code (CL2-L58) and applying rules (Tables 1-17) and logic via a parser (CL5-L51-55, Fig. 7). The development tool disclosed by Coad further discloses an editor for displaying and editing retrieved source code (CL4-L57-60, Fig. 2) and a synchronized (i.e. dynamically linked) viewer (visualizer) for displaying graphical representations of flows within the source code (CL16-L57 to CL17-L47, Figs. 11-17). The examiner notes that applicants claimed "visualizer" is merely disclosed to be a software tool that reads the code and generates diagrams and graphical representation of the program flow, data flow or the logic of the code, (specification: page 3, lines 20-22) and is hence interpreted to be functionally equivalent to the ICE editor teachings of Coad noted above.

Coad does not explicitly disclose that the types include data manipulation languages.

Kemper teaches software program analysis inclusive of data manipulation languages (pp. 80, Section 3.8.2, pp. 88, Section 3.9.3).

It would have been obvious to one having ordinary skill in the art at the time the claimed invention was made to modify the teachings of Coad relating to automatically viewing edited changes to a graphical representation and a text representation of source code, with the teachings of Kemper relating to analysis of data manipulation languages, to realize the elements of the claimed invention. An obvious motivation exists since, in this case, the Coad reference teaches to the Kemper reference, and the

Kemper reference teaches to the Coad reference. Specifically, both Coad and Kemper teach analyzing source code in a database environment. Coad teaches to Kemper because Coad teaches techniques simultaneously viewing edited changes to a graphical representation of data base source code (See: Coad, Summary of Invention). Kemper teaches to Coad because Kemper specifically teaches that the source code is a data manipulation language. (See: Kemper: Section 3.2.8) Further, the level of skill required by an artisan to realize the claimed limitations of the present invention is clearly established by both references. (See: Coad/Kemper, Background/Abstract) Accordingly, a skilled artisan having access to the teachings of Coad and Kemper, would have knowingly modified the teachings of Coad with the teachings of Kemper (or visa versa) to realize the claimed elements of the present invention while reducing the cost and development time. The examiner also notes that while Coad does not explicitly disclose that the source code languages include data manipulation languages, data base manipulation language in general are very well-known in the art and hence would have necessary been incorporated by a skilled in order to accommodate database management systems. (See: "data base manipulation language", Microsoft Computer Dictionary, 1997)

Per claims 19-20, 25: Coad teaches graphical representations of program flows where edits to the graphical flow are automatically reflected in the source code (text) view and visa versa as noted above. (Abstract, Figs. 13-18)

Per claims 22-24, 36, 38-40: The ICE editor disclosed inherently provides features relating to document manager and template manages (CL4-L58, Fig. 2)

including data selection, inspection, and discovery functions. Coad further teaches a data manipulation language. (CL15-L58 to CL16-L25) Further, the processing system disclosed by Coad includes Internet access (CL5-L31-49) for retrieving and executing source code from remote computers.

Per claims 26-29, 33-34, 37: Coad teaches changing the appearance of the graphical view based on source code error detection within certain segments (Tables 10-17, Fig. 8a) and displaying debugging tips (i.e. hints) during the debugging audit process (Figs. 8b & 8c) for different types of errors (Tables 10-17).

Per claims 30-32: Coad teaches the use of templates (CL15-L58 to CL16-L26, CL16-L46-57, Figs. 9, 11) on source code from a user selectable library.

6. Claims 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,851,107 issued to Coad et al in view of "An Analysis of Geometric Modeling in Database Systems", Kemper et al, ACM Computing Surveys, Vol. 19, No. 1, March 1987 in further view of U.S. Patent 6,356,285 issued to Burkwald et al.

Per claim 21: The limitations of independent claim 18 relating to simultaneously viewing edited changes to a graphical representation, a text representation of source code, and data manipulation languages are rendered obvious by the combination of Coad and Kemper as previously noted above.

However, Coad and Kemper do not explicitly disclose features relating to expanding and collapsing the displayed graphical representation of the source code flow.

Burkwald teaches a software analysis tool where the user can expand or collapse the displayed graphical representation of the source code flow (CL14-L49-67, Figs. 6-8)

It would have been obvious to one of ordinary skill in the art at the time of the invention to further modify the teachings of Coad and Kemper with the teachings of Burkwald relating to expanding and collapsing the displayed graphical representation of the source code flow to realize the elements of the claimed invention using the same reasoning set forth above.

Allowable Subject Matter

7. *Claims 1-4, and 6-17 have now been allowed over the prior art of record.*

The following is an examiner's statement of reasons for allowance:

Applicants are disclosing a software development environment where a user can simultaneously view a graphical representation and a text representation of source code including views that are synchronized such that modifications to one view are automatically reflected in the other view, including the ability to detect the particular language of the source code by applying rules. This has been disclosed in the prior art of record.

While these elements are individually disclosed in the prior art, the prior art of record does not meet the conditions as suggested in MPEP section 2132, namely:

*“The identical invention must be shown in as complete detail as is contained in the ... claim.” Richardson v. Suzuki Motor Co., 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim, but this is not an **ipsissimis verbis** test, i.e., identity of terminology is not required. **In re Bond**, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).”*

In particular, the prior art of record does not disclose the specific arrangement of elements including a document manager, and editor, a parser layer, and a dynamically linked visualizer all applicable to detect one of a plurality of data manipulation language types as now recited in independent claim 1.

The features noted above relating to the specific arrangement of hardware integrated development system elements, as now recited in the independent claim 1 renders the claimed invention non-obvious over the prior art of record. Dependent claims 3-4, and 6-17 are deemed allowable as being dependent from independent claim 1.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

Conclusion


8. *The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.*

U.S. Patent Application 2003/0056192 issued to Burgess et al teaches a software development visualization tool with source code graphical representation.

U.S. Patent Application 2002/0097253 issued to Charisius et al teaches a software development visualization tool with source code graphical representation.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred Ferris whose telephone number is 571-272-3778 and whose normal working hours are 8:30am to 5:00pm Monday to Friday. Any inquiry of a general nature relating to the status of this application should be directed to the group receptionist whose telephone number is 571-272-3700. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean Homere can be reached at 571-272-3780. The Official Fax Number is: (703) 872-9306

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October 14, 2005

A handwritten signature in black ink, appearing to be 'FF', with the date '10/21/05' written below it.